

AMENDMENTS TO THE CLAIMS

Cancel claims 1, 19 and 37 without prejudice.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (canceled)

2. (currently amended) ~~The method of claim 1, wherein the comparing includes~~

A method comprising:

analyzing an input audio signal to determine a power spectral density profile of the input audio signal;

comparing the power spectral density profile of the input audio signal with a plurality of template profiles; and

selectively attenuating frequency bands of the input audio signal based on the comparing.

3. (original) The method of claim 2, wherein the plurality of template profiles includes three template profiles.

4. (original) The method of claim 2, wherein the selectively attenuating includes selecting one of the plurality of template profiles based on the comparing.

5. (original) The method of claim 4, wherein the selective attenuating further includes determining a respective attenuation factor for each of the frequency bands of the input audio signal based on a distance, for the respective frequency band, between the power spectral density profile and the selected template profile.

6. (original) The method of claim 4, wherein the selecting of one of the plurality of template profiles is based on respective distances between the template profiles and the power spectral density profile of the input audio signal.

7. (original) The method of claim 6, wherein the selecting of one of the plurality of template profiles is based on respective weighted distances between the template profiles and the power spectral density profile of the input audio signal.

8. (currently amended) The method of claim 4 2, further comprising:

using the input audio signal to drive a speaker after the selectively attenuating of the frequency bands of the input audio signal.

9. (original) A method comprising:

analyzing an input audio signal to determine a power spectral density profile of the input audio signal;

adjusting the power spectral density profile to form an adjusted power spectral density profile;

comparing the adjusted power spectral density profile with at least one template profile;
and

selectively attenuating frequency bands of the input audio signal on the basis of the
comparing.

10. (original) The method of claim 9, wherein the adjusting is based on a signal received via a
microphone.

11. (original) The method of claim 10, wherein the adjusting is based on an estimated external
gain between a speaker and the microphone.

12. (original) The method of claim 9, wherein the comparing includes comparing the adjusted
power spectral density profile with a plurality of template profiles.

13. (original) The method of claim 12, wherein the plurality of template profiles includes three
template profiles.

14. (original) The method of claim 12, wherein the selectively attenuating includes selecting one
of the plurality of template profiles based on the comparing.

15. (original) The method of claim 14, wherein the selectively attenuating further includes
determining a respective attenuation factor for each of the frequency bands of the input audio

signals based on a distance, for the respective frequency band, between the adjusted power spectral density profile and the selected template profile.

16. (original) The method of claim 14, wherein the selecting of one of the plurality of template profiles is based on respective distances between the template profiles and the adjusted power spectral density profile.

17. (original) The method of claim 16, wherein the selecting of one of the plurality of template profiles is based on respective weighted distances between the template profiles and the adjusted power spectral density profile.

18. (original) The method of claim 9, further comprising:

using the input audio signal to drive a speaker after the selectively attenuating of the frequency bands of the input audio signal.

19. (canceled)

20. (currently amended) ~~The apparatus of claim 19, wherein the processor is to~~

An apparatus comprising:

a processor to couple to a speaker; and

a memory coupled to the processor;

wherein the processor is to:

analyze an input audio signal to determine a power spectral density profile of the input audio signal;

compare the power spectral density profile of the input audio signal with a plurality of template profiles residing in the memory; and

selectively attenuate frequency bands of the input audio signal on the basis of the comparison of the power spectral density profile with the at least one template profile.

21. (original) The apparatus of claim 20, wherein the plurality of template profiles residing in the memory includes three template profiles.

22. (original) The apparatus of claim 20, wherein the processor is to select one of the plurality of template profiles based on the comparison of the power spectral density profile of the input audio signal with the plurality of template profiles.

23. (original) The apparatus of claim 22, wherein the processor is to determine a respective attenuation factor for each of the frequency bands of the input audio signal based on a distance, for the respective frequency band, between the power spectral density profile and the selected template profile.

24. (original) The apparatus of claim 22, wherein the processor is to select one of the plurality of template profiles based on respective distances between the template profiles and the power spectral density profile of the input audio signal.

25. (original) The apparatus of claim 24, wherein the processor is to select one of the plurality of template profiles based on respective weighted distances between the template profiles and the power spectral density profile of the input audio signal.

26. (currently amended) The apparatus of claim ~~19~~ 20, wherein the processor is to apply the input audio signal to a speaker after the selective attenuating of the frequency bands of the input audio signal.

27. (original) An apparatus comprising:

a processor to couple to a speaker;

a microphone coupled to the processor; and

a memory coupled to the processor;

wherein the processor is programmed to:

receive an input audio signal;

analyze the input audio signal to determine a power spectral density profile of the input audio signal;

adjust the power spectral density profile to form an adjusted power spectral density profile;

compare the adjusted power spectral density profile of the input audio signal with at least one template profile residing in the memory; and

selectively attenuate frequency bands of the input audio signal based on the comparison of the adjusted power spectral density profile with the at least one template profile.

28. (original) The apparatus of claim 27, wherein the processor is to adjust the power spectral density profile based on a signal received via the microphone.

29. (original) The apparatus of claim 28, wherein the processor is to adjust the power spectral density profile based on an estimated external gain between the speaker and the microphone.

30. (original) The apparatus of claim 27, wherein the processor is to compare the adjusted power spectral density profile of the input audio signal with a plurality of template profiles residing in the memory.

31. (original) The apparatus of claim 30, wherein the plurality of template profiles residing in the memory includes three template profiles.

32. (original) The apparatus of claim 30, wherein the processor is to select one of the plurality of template profiles based on the comparison of the adjusted power spectral density profile of the input audio signal with the plurality of template profiles.

33. (original) The apparatus of claim 32, wherein the processor is to determine a respective attenuation factor for each of the frequency bands of the input audio signal based on a distance,

for the respective frequency band, between the adjusted power spectral density profile and the selected template profile.

34. (original) The apparatus of claim 32, wherein the processor is to select one of the plurality of template profiles based on respective distances between the template profiles and the adjusted power spectral density profile of the input audio signal.

35. (original) The apparatus of claim 34, wherein the processor is to select one of the plurality of template profiles based on respective weighted distances between the template profiles and the adjusted power spectral density profile of the input audio signal.

36. (original) The apparatus of claim 27, wherein the processor is to apply the input audio signal to a speaker after the selective attenuating of the frequency bands of the input audio signal.

37. (canceled)

38. (currently amended) ~~The apparatus of claim 37, wherein the comparing includes~~

An apparatus comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

analyzing an input audio signal to determine a power spectral density profile of the input audio signal;

comparing the power spectral density profile of the input audio signal with a plurality of template profiles; and

selectively attenuating frequency bands of the input audio signal based on the comparing.

39. (original) The apparatus of claim 38, wherein the selectively attenuating includes selecting one of the plurality of template profiles based on the comparing.

40. (original) An apparatus comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

analyzing an input audio signal to determine a power spectral density profile of the input audio signal;

adjusting the power spectral density profile to form an adjusted power spectral density profile;

comparing the adjusted power spectral density profile with at least one template profile; and

selectively attenuating frequency bands of the input audio signal on the basis of the comparing.

41. (original) The apparatus of claim 40, wherein the adjusting is based on a signal received via a microphone.

42. (original) The apparatus of claim 41, wherein the adjusting is based on an estimated external gain between a speaker and the microphone.

43. (new) A method comprising:

storing at least one template profile in a memory in a cellular telephone;

receiving an audio signal via an antenna of the cellular telephone;

analyzing the audio signal to determine a power spectral density profile of the audio signal;

comparing the power spectral density profile of the audio signal with the at least one template profile; and

selectively attenuating frequency bands of the audio signal based on the comparing.